

## Program

5 <sup>th</sup> April	
8:15-8:25	<b>Opening</b>
8:25-8:45	Photo
<b>Topic:</b> Henk/student/student of student <b>Chair:</b> Murray Batchelor (Chongqing University, China)	
8:45-9:15	<i>The zoo of two-dimensional <math>O(n)</math> models</i> Henk W. J. Bloete (Leiden University, Netherlands)
9:15-9:45	<i>From Critical Phenomena to Colloids: Phase separation out of equilibrium</i> Erik Luijten (Northwestern University, USA)
9:45-10:15	<i>The halon: a quasiparticle featuring critical charge fractionalization</i> Kun Chen (陈锬 Rutgers University, USA)
<b>10:15-10:35</b>	<b>Tea Break</b>
<b>Topic:</b> Classical lattice models <b>Chair:</b> Hai-Jun Zhou (周海军 Institute of Theoretical Physics, CAS)	
10:35-11:05	<i>Critical percolation in anisotropic systems</i> Robert Ziff (University of Michigan, USA)
11:05-11:35	<i>Behavior of the specific heat in the Ising model for <math>d \geq 4</math></i> Per-Håkan Lundow (Umea University, Sweden)
11:35-12:05	<i>Finite- Size Scaling of Correlation Function</i> Xiao-Song Chen (陈晓松 Institute of Theoretical Physics, Chinese Academy of Sciences )
12:05-12:25	<i>Conformal Bootstrap Approach to Critical Phenomena</i> Ning Su (苏宁 Institute of Theoretical Physics, Chinese Academy of Sciences )
<b>12:25-14:00</b>	<b>Lunch Break</b>
<b>Topic:</b> Soft matter physics <b>Chair:</b> Bo Zheng (郑波 Zhejiang University)	
14:00-14:30	<i>Supercritical phenomenon in complex liquids</i> Li-Mei Xu (徐莉梅 Peking University)
14:30-15:00	<i>Enhanced sampling and metastable state analyzing in soft matters</i> Xin Zhou (周昕 University of Chinese Academy of Science)
15:00-15:20	<i>Entropy Stabilizes Floppy Crystals of Mobile DNA-Coated Colloids</i> Hao Hu (胡皓 Nanyang Technological University of Singapore)
15:20-15:40	<i>Phase transitions in a confined polyelectrolyte solution</i> Bing Miao (苗兵 University of Chinese Academy of Sciences)
<b>15:40-16:00</b>	<b>Tea Break &amp; Posters</b>
<b>Topic:</b> Monte Carlo simulations/Network RG methods <b>Chair:</b> Jonathan Machta (University of Massachusetts Amherst, USA)	
16:00-16:30	<i>The worm process for the Ising model is rapidly mixing</i> Timothy Garoni (Monash University, Australia)
16:30-17:00	<i>How Can We Guide the Worm in a Lattice Model</i> Hidemaro Suwa (University of Tokyo, Japan)
17:00-17:30	<i>Neural Network Renormalization Group</i> Lei Wang (王磊 Institute of Physics, Chinese Academy of Sciences)
17:30-17:50	<i>Overlap of two topological phases in the antiferromagnetic Potts model</i> Cheng-Xiang Ding (丁成祥 Anhui University of Technology)
17:50-18:10	<i>Finite-size scaling above the upper critical dimension</i> Zong-Zheng Zhou (周宗政 Monash University, Australia)

<b>6<sup>th</sup> April</b>	
<b>Topic:</b> Novel methodologies	
<b>Chair:</b> Xiao-Song Chen (陈晓松)	
8:15-8:45	<i>Machine Learning of Quantum and Topological Physics</i> Hui Zhai (翟荟 Institute of Advanced Studies, Tsinghua University)
8:45-9:15	<i>Born Machine: Unsupervised Generative Modeling using Matrix Product States</i> Pan Zhang (张潘 Institute of Theoretical Physics, Chinese Academy of Sciences)
9:15-9:45	<i>BLUES function method in physics</i> Joseph Indekeu (Institute for Theoretical Physics, KU Leuven, Belgium)
9:45-10:15	<i>Simulating topological phase transition of lattice models in linear circuit networks</i> Jie Ren (任捷 Tongji University, China)
<b>10:15-10:35</b>	<b>Tea Break</b>
<b>Topic:</b> Monte Carlo/Tensor RG methods	
<b>Chair:</b> Peter Young (University of California, USA)	
10:35-11:05	<i>Population Annealing: A fast algorithm for spin systems with rough free energy landscapes</i> Jonathan Machta (University of Massachusetts Amherst, USA)
11:05-11:35	<i>Clock Monte Carlo Methods</i> Manon Michel (Ecole Normale Supérieure, France)
11:35-12:05	<i>Random numbers and large-scale Monte-Carlo</i> Lev Shchur (Landau Institute for Theoretical Physics, Russia)
12:05-12:25	<i>Nested Tensor Network Method and its applications</i> Zhi-Yuan Xie (谢志远 Renmin University of China)
<b>12:25-14:00</b>	<b>Lunch Break</b>
<b>Topic:</b> Network science	
<b>Chair:</b> Ye Wu (吴晔)	
14:00-14:30	<i>Explosive synchronization and Bellerophon states</i> Shu-Guang Guan (管曙光 East China Normal University)
14:30-15:00	<i>The Spreading Dynamics of Forget-Remember Mechanism</i> Wei Li (李炜 Central China Normal University)
15:00-15:30	<i>Universal state equation of quasi-particle gas for American domestic passenger flights</i> Chen-Ping Zhu (朱陈平 Nanjing University of Aeronautics and Astronautics)
15:30-15:50	<i>Scaling in complex network and explosive percolation</i> Ding-Ding Han (韩定定 East China Normal University)
15:50-16:10	<i>Phase transitions in cooperative percolations</i> Li Chen (陈理 Shaanxi Normal University)
16:10-16:30	<i>Improved recommendation algorithms based on data feature mining</i> Tian Qiu (邱天 Nanchang Aeronautical University, China)
<b>16:30-16:50</b>	<b>Tea Break</b>
<b>Chair:</b> Henk Bloete (Leiden University, Netherlands)	
16:50-17:20	<i>Critical and Griffiths-McCoy singularities in quantum Ising spin-glasses on d-dimensional hypercubic lattices: A series expansion study</i> Peter Young (University of California, USA)
	<b>Poster</b>
<b>18:00-20:00</b>	<b>Banquet &amp; 75th-birthday party of Henk Bloete</b>

7 <sup>th</sup> April		
<b>Topic:</b> Disordered systems <b>Chair:</b> Li-Mei Xu (徐莉梅 Peking University)		
8:15-8:45	<i>The Ising spin glass: new methods for old models and old methods for new models</i> Martin Weigel (Coventry University, UK)	
8:45-9:15	<i>Quantum vs Classical Optimization</i> Helmut G. Katzgraber (Texas A&M University, USA)	
9:15-9:45	<i>Percolation, Frustration, and Computational Complexity</i> Hai-Jun Zhou (周海军 Institute of Theoretical Physics, Chinese Academy of Sciences)	
9:45-10:05	<i>The saddle point solution of the Landau-Ginzburg-Wilson for McCoy-Wu Ising model with disorder</i> Xin-Tian Wu (吴新天 Beijing Normal University)	
10:05-10:25	Tea Break	
<b>Topic:</b> Quantum systems <b>Chair:</b> Xi-Wen Guan (管习文 Wuhan Institute of Physics and Mathematics of Chinese Academy of Sciences)		
10:25-10:55	<i>Decoding quantum criticalities from fermionic/parafermionic topological states</i> Guang-Ming Zhang (张广铭 Tsinghua University)	
10:55-11:25	<i>Quantum Monte Carlo study of Disordered Spin Systems</i> Dao-Xin Yao (姚道新 Sun Yat-sen University)	
11:25-11:55	<i>Quantum phase transition in the spin-boson model</i> Qing-Hu Chen (陈庆虎 Zhejiang University)	
11:55-12:15	<i>Universal Scaling and Critical Exponents of the Anisotropic Quantum Rabi Model</i> Mao-Xin Liu (刘卯鑫 Beijing Computational Science Research Center)	
12:15-14:00	Lunch Break	
<b>Topic:</b> Non-equilibrium systems <b>Chair:</b> Zhan-Chun Tu (涂展春 Beijing Normal University)		
14:00-14:30	<i>Landau-Lifshitz-Gilbert equation and phase transitions</i> Bo Zheng (郑波 Zhejiang University, China)	
14:30-15:00	<i>Physics of Kuramoto oscillators</i> Yue-Heng Lan (兰岳恒 Beijing University of Posts and Telecommunications)	
15:00-15:30	<i>Synchronic patterns in coupled systems</i> Xin-Gang Wang (王新刚 Shaanxi Normal University, China)	
15:30-15:50	<i>Application of a variant lattice Boltzmann method to nonequilibrium reacting flows</i> Chuan-Dong Lin (林传栋 Tsinghua University, China)	
15:50-16:10	Tea Break & Posters	
<b>Topic:</b> Quantum Systems <b>Chair:</b> Wen-An Guo (郭文安 Beijing Normal University)		
16:10-16:30	<i>Quantum Spin Liquid with Even Ising Gauge Field Structure on Kagom Lattice</i> Yan-Cheng Wang (王艳成 China University of Mining and Technology)	
16:30-16:50	<i>Dynamic Localization in Spin Clusters</i> Kai Ji (吉凯 Shanghai Normal University, China)	
16:50-17:20	<i>Probing spin charge separation with quantum criticality</i> Xi-Wen Guan (管习文 Wuhan Institute of Physics and Mathematics of Chinese Academy of Sciences)	
17:20-17:50	<i>Critical behavior in a model of free parafermions</i> Murray Batchelor (Chongqing University, China)	
17:50-18:00	Closing	Youjin Deng (邓友金)